

June 28, 29 and 30.—Over Minnesota and the Upper Lakes into Canada, accompanied by severe thunder-storms north and west of the Ohio valley, brisk winds over the Northwest, Lake region and Atlantic States, and rain, often quite heavy, from the lower Mississippi, Northwest and Lakes to the Atlantic coast.

One Cautionary Signal was displayed at Duluth on the 17th.

## **TEMPERATURE.**

The mean temperature for June, 1873, is higher than the mean for the month, except for the vicinity of Lake Superior, where it is lower by  $0^{\circ}.7$  to  $1^{\circ}.8$ ; in the South Atlantic States it varies from  $1^{\circ}.6$  below to  $1^{\circ}.0$  above, and from New Jersey and eastern Pennsylvania to Maine,  $1^{\circ}.2$  below to  $1^{\circ}.1$  above. The excess is greatest in northeastern Virginia,  $4^{\circ}.5$ ; northern New York,  $1^{\circ}.1$  to  $4^{\circ}.7$ ; Kentucky, Ohio, Indiana and southern Michigan,  $1^{\circ}.7$  to  $6^{\circ}.5$ ; southern Alabama,  $4^{\circ}.9$ ; Illinois, southern Wisconsin and eastern Iowa and Missouri,  $7^{\circ}.5$  to  $2^{\circ}.1$ ; eastern Kansas,  $4^{\circ}.2$ ; southern and western Minnesota,  $4^{\circ}.8$  to  $6^{\circ}.7$ ; Fort Sully, Dakota,  $8^{\circ}.0$  (?) and Cheyenne,  $4^{\circ}.4$ .

The mean for June, 1873, is lower than that for June, 1872, at San Francisco,  $1^{\circ}.1$ ; in the Gulf States,  $0^{\circ}.4$  to  $1^{\circ}.6$ ; in the South Atlantic States,  $0^{\circ}.3$  to  $2^{\circ}.0$ ; in the vicinity of Lake Superior,  $0^{\circ}.4$  to  $1^{\circ}.6$ . It varies in the Middle Atlantic and New England States from  $1^{\circ}.1$  above to  $3^{\circ}.9$  below. The former is the higher in Iowa and southern and western Minnesota,  $4^{\circ}.5$  to  $5^{\circ}.5$ ; in the Ohio valley,  $1^{\circ}.0$  to  $4^{\circ}.7$ ; over the Lower Lake region,  $1^{\circ}.1$  to  $2^{\circ}.7$ .

### **MEAN TEMPERATURE.**

SIGNAL SERVICE.	1871.			1872.			1873.		
STATIONS.	APR'L	MAY	JUNE	APR'L	MAY	JUNE	APR'L	MAY	JUNE
Washington.....	57°·6	64°.	73°·2	56°·2	67°·8	76°.	53°·3	63°·6	76°·5
New York .....	54°·2	58°·6	69°.	49°·7	61°·9	72°·8	46°·3	57°·6	68°·9
Boston.....	46°·7	57°·4	66°·2	46°·3	57°·2	67°·6	44°·6	56°·8	67°·2
Chicago.....	51°·2	56°·7	66°·8	47°·9	56°·1	69°·5	42°·3	53°·9	70°·2
St. Louis.....	60°·3	69°·1	79°.	57°·5	67°·4	76°·9	51°·2	65°·1	77°·1
New Orleans.....	70°·8	76°.	82°·5	70°·4	75°·8	80°·5	66°·9	73°·7	80°.

## **RAIN-FALL.**

The returns for the month from the Signal Service stations show that there has been an excess of rain over the mean from Florida to western Tennessee and westward to Arkansas and eastern Texas, varying from 6.50 inches to 0.86 inch, from eastern South Carolina to southern Virginia 1.29 inches to 0.60 inch, from central Indiana to southeastern Missouri 1.42 inches to 0.68 inch, over northeastern Ohio 1.23 inches, and from eastern Nebraska northeastward to eastern Minnesota and northern Wisconsin and over northern Michigan 4.34 inches to 0.45 inch.

There has been a deficiency in New England varying from 1.79 to 4.00 inches, in the Middle States, except southern Virginia, 0.44 to 3.26 inches, from northern portions of Georgia and South Carolina to the Ohio valley 0.35 to 2.03 inches, from northeastern Kansas to southern Wisconsin and northern Illinois 1.67 to 3.90 inches, over northwestern Ohio and southeastern Michigan 0.29 to 1.23 inches, and over western Minnesota 0.98 inch.

## **R I V E R S .**

The Red river rose steadily at Shreveport during the first week, after which it remained nearly stationary until the 28th, when it began to fall slowly.

The Arkansas fell and rose alternately during the first twenty days, then fell steadily, having been eight and a half feet lower on the 30th than on the 1st.

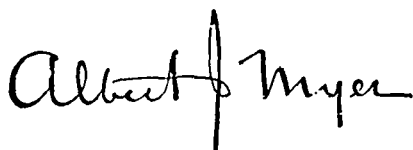
The Missouri at Fort Benton rose steadily until the 19th. Throughout the lower portion of the river an almost continuous rise occurred, although a slight fall was observed between Kansas City and Brunswick after the 26th.

The Mississippi fell slowly at St. Paul and between Cairo and New Orleans, (excepting some slight oscillations,) the difference between highest and lowest water for the month being at St. Paul nearly five feet, between Cairo and Vicksburg nearly eight feet and at New Orleans eleven inches; between Le Claire and Warsaw a gradual rise occurred from the 4th until the middle of the month, after which a steady fall was observed; at St. Louis the water rose slightly between the 3d and 11th, falling slowly after that date.

The Cumberland at Nashville fell from the 1st to the 9th, then rose until the 19th, fell again until the 27th, rose until the 29th, but on the 30th it began again to fall—the difference between highest water (19th) and lowest water (9th) being six feet.

The Ohio, at Marietta and above, as well as its tributaries, has changed comparatively little; from Cincinnati to Evansville it has fallen almost continuously—the difference between highest and lowest water being nearly nine feet at Cincinnati and Evansville and three at Louisville; at Paducah the water fell from the 1st to the 11th, rose until the 21st, falling again from that date until the 30th.

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